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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,642	09/30/2003	Kazutaka Katayama	031129	1143

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EXAMINER

PATTERSON, MARC A

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/673,642

Applicant(s)

KATAYAMA ET AL.

Examiner

Marc A Patterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/30/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

NEW REJECTIONS

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1 and 5 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 3 of U.S. Patent No. 6,619,330 B2 in view of Hoeschele (U.S. Patent No. 3,954,689). Although the conflicting claims are not identical, they are not patentably distinct from each other because Hoeschele teaches a dimer acid moiety present in a proportion of 3 to 30 mol% for the purpose of obtaining a hose having desirable physical properties (the short chain ester unit content is 25 – 95% by weight, therefore the long chain ester content is 5 – 75% by weight, and the molecular weight of the long chain ester units is 3% greater than that of the short chain ester units is 3%, and the long chain ester units are therefore present in a proportion of 8 – 78 mol%; column 2, lines 6 – 9 and 62 – 65; column 4, lines 29 – 38). It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a dimer acid moiety present in a proportion

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of 3 to 30 mol% in the hose to obtain a hose having desirable physical properties as taught by Hoeschele. It also would have been obvious for one of ordinary skill in the art to use a single layer structure for the hose, because a structure comprising at least one layer is claimed, and to use the fuel hose as an automotive in – tank fuel hose for installation in a fuel tank because the application of automotive in – tank fuel hose for installation in a fuel tank is an application for a fuel hose.

3. Claims 3 – 4 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 3 of U.S. Patent No. 6,619,330 B2 in view of Hoeschele (U.S. Patent No. 3,954,689) and further in view of Hasegawa et al (U.S. Patent No. 5,550,190). Although the conflicting claims are not identical, they are not patentably distinct from each other because Hasegawa et al teach that a hose and a bellows are interchangeable articles (column 11, lines 50 – 55) comprising thermoplastic elastomer (column 11, lines 1 – 2) and teach an article thickness of 1 mm (column 15, lines 11 – 14) for the purpose of obtaining articles having excellent strength (column 11, lines 33 – 36). It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a bellows structure and a thickness of 0.5 mm to 1.5 mm in the hose, therefore a hose having a bellows structure, in order to obtain a hose having excellent strength as taught by Hasegawa et al.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoeschele (U.S. Patent No. 3,954,689).

With regard to Claim 1, Hoeschele discloses a hose (column 6, lines 62), therefore a structure, formed by a polybutylene terephthalate (a copolyester having 1,4 butylene terephthalate units; column 4, lines 22 – 25) that is a thermoplastic elastomer (column 10, lines 46 – 47) containing a dimer acid moiety (the term ‘long chain ester units’ refers to the reaction product of dimer acid with a low molecular weight glycol, and are a repeating unit, therefore a moiety, in the copolyester; column 3, lines 6 – 12); the dimer acid moiety is present in a proportion of 3 to 30 mol% (the short chain ester unit content is 25 – 95% by weight, therefore the long chain ester content is 5 – 75% by weight, and the molecular weight of the long chain ester units is 3% greater than that of the short chain ester units is 3%, and the long chain ester units are therefore present in a proportion of 8 – 78 mol%; column 2, lines 6 – 9 and 62 – 65; column 4, lines 29 – 33); with regard to the claimed aspect of the hose comprising a single layer, Hoeschele discloses that lamination of the hose is optional (the advantages are useful in various combining and laminating operations, therefore the hose is also used without lamination and therefore as a single layer; column 7, lines 16 – 20); with regard to the claimed aspect of the hose being an automotive in – tank fuel hose for installation in a fuel tank, and capable of following a

deformation of the fuel tank and absorbing vibration caused by a fuel pump, because the hose disclosed by Hoeschele has the same chemical structure as the claimed hose, the properties of being usable as an automotive in – tank fuel hose and being capable of following a deformation of the fuel tank and absorbing vibration caused by a fuel pump are inherent to Hoeschele.

However, the claimed aspect of the hose being ‘capable of following a deformation of the fuel tank and absorbing vibration caused by a fuel pump’ are directed to functional results of the claimed invention, rather than its structure, and are therefore given little patentable weight.

Hoeschele fails to disclose a dimer acid moiety present in a proportion of 3 to 30 mol%.

With regard to Claim 5, the hose is formed of both polybutylene terephthalate and polybutylene naphthalate (column 3, lines 38 – 48; column 4, lines 22 – 25).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3 – 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoeschele (U.S. Patent No. 3,954,689) in view of Hasegawa et al (U.S. Patent No. 5,550,190).

Hoeschele discloses a hose comprising thermoplastic elastomer as discussed above. With regard to Claims 3 – 4, Hoeschele fails to disclose a hose having a bellows structure so as to compensate for deformation of the fuel tank and to absorb vibration due to the fuel pump and a thickness of 0.5 mm to 1.5 mm.

Hasegawa et al teach that a hose and a bellows are interchangeable articles (column 11, lines 50 – 55) comprising thermoplastic elastomer (column 11, lines 1 – 2) and teach an article thickness of 1 mm (column 15, lines 11 – 14) for the purpose of obtaining articles having excellent strength (column 11, lines 33 – 36). One of ordinary skill in the art would therefore having recognized the advantage of providing for the bellows and thickness of Hasegawa et al in Hoeschele, which is a hose comprising thermoplastic elastomer, depending on the desired strength of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a bellows structure and a thickness of 0.5 mm to 1.5 mm in Hoeschele, therefore a hose having a bellows structure, in order to obtain a hose having excellent strength as taught by Hasegawa et al. With regard to the claimed aspect of the bellows having a structure so as to compensate for deformation of the fuel tank and to absorb vibration due to the fuel pump, as stated above, because the hose disclosed by Hoeschele has the same chemical structure as the claimed hose, the properties of having a structure so as to compensate for deformation of the fuel tank and to absorb vibration due to the bellows are inherent to Hoeschele. However, the claimed aspect of the bellows being having a structure so as to compensate for deformation of the fuel tank and to absorb vibration due to the fuel pump are directed to functional results of the claimed invention, rather than its structure, and are therefore given little patentable weight.

ANSWERS TO APPLICANT'S ARGUMENTS

8. Applicant arguments regarding the obviousness-type double patenting rejections of Claim 1 as being unpatentable over claim 1 of U.S. Patent No. 6,619,330 B2, 35 U.S.C. 102(b) rejection of Claim 1 as being anticipated by Hoeschele (U.S. Patent No. 3,954,689), of record in the previous Action, have been carefully considered but have not been found to be persuasive for the reasons set forth below.

Applicant argues, on page 5 of the remarks dated April 11, 2005, that Ito et al is an ordinary fuel hose, and is not used as an in – tank fuel hose; therefore, Applicant argues, during use of the hose fuel will be in contact only with the inner surface of the hose, and will not be in contact with an outer surface of the hose.

However, as stated on page 2 of the previous Action, with regard to the claimed aspect of the hose being an automotive in – tank fuel hose for installation in a fuel tank, and capable of following a deformation of the fuel tank and absorbing vibration caused by a fuel pump, because the hose disclosed by Hoeschele has the same chemical structure as the claimed hose, the property of being usable as an automotive in – tank fuel hose is inherent to Hoeschele. Furthermore, it is unclear why the use of the hose in a fuel tank necessarily means that the fuel will be in contact with an outer surface of the hose.

Applicant also argues on page 5 that the outer surface of the claimed invention requires resistance to sour gasoline because during use of the hose fuel will be in contact with the outer surface of the hose.

However, as stated above, it is unclear why the use of the hose in a fuel tank necessarily means that the fuel will be in contact with an outer surface of the hose.

Applicant also argues, on page 6, that the examples of Ito et al disclose hoses having a three or five layer structure, rather than a single layer structure.

However, Claim 1 of Ito et al does not relate to a hose having a three or five layer structure; it relates only to a structure having one or more layers.

Applicant also argues on page 6 that the hose disclosed by Ito et al is not an in – tank fuel hose.

However, as stated on page 2 of the previous Action, it would have been obvious for one of ordinary skill in the art to use the fuel hose as an automotive in – tank fuel hose for installation in a fuel tank because the application of automotive in – tank fuel hose for installation in a fuel tank is an application for a fuel hose.

Applicant also argues, on page 7, that Hoeschele discloses a hydraulic hose tube and covers and therefore does not disclose a hose having a single layer structure, and also does not disclose an in – tank fuel hose.

However, Hoeschele clearly discloses a single layer hose, because Hoeschele discloses the use of the composition for a hose tube, therefore a hose. Furthermore, as stated above, because the hose disclosed by Hoeschele has the same chemical structure as the claimed hose, the property of being usable as an automotive in – tank fuel hose is inherent to Hoeschele.

Applicant also argues, on page 8 that for the reasons stated above, Claims 1 and 3 – 5 are allowable. In response, the above answers are repeated.

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9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc A Patterson whose telephone number is 571-272-1497.

The examiner can normally be reached on Mon - Fri 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marc A. Patterson
Marc A. Patterson, PhD.
Examiner
Art Unit 1772

Harold Pyon
HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

6/21/05